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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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23419 7590 10/05/2007 COOLEY GODWARD KRONISH LLP ATTN: Patent Group Suite 1100 777 - 6th Street, NW Washington, DC 20001			EXAMINER NAUROT TON, JOAN	
			ART UNIT 2154	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/649,364	Applicant(s) KNEE ET AL.	
	Examiner Joan B. Naurot Ton	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/21/2007 and 5/24/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This second action non-final is in response to amendments filed on 7/25/2007.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7, 9, 10, 15, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudri et al, hereinafter referred to as Chaudri (US patent 6275861) in view of Lawande et al, hereinafter referred to as Lawande (US patent 6219697).

Regarding claim 1: Chaudri discloses a method of processing data in a processing system, said method comprising: receiving a first message of a first flow comprised of a first plurality of messages, (Col 2, lines 45-49) said first message containing flow information identifying said first flow, (Col 3, line 58) deriving a first event from said first message; (Col 4, line 5, "flow identifier may be attached to the packet) retrieving, using said flow information, a first flow state characterizing said first flow, (Col 3, lines 52-53 and Col 8, lines 12-13, "flow definitions derived from said flow identifications..")

Chaudri discloses all the limitations as disclosed above except for a stateful protocol

and consistent with a stateful protocol associated with said first flow, said first flow state including a first workspace portion and a second workspace portion; assigning said first workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and processing, said first event using said first protocol processing core and said second protocol processing core.

Lawande discloses a stateful protocol and consistent with a stateful protocol associated with said first flow, said first flow ("incoming data stream" Col 4, lines 19-20) state (Since TCP is disclosed in Col in Col 2, lines 14-15, Figure 5, and in Col 11, line 31, a state is implicit since TCP is a stateful protocol which uses state relevant information) including a first workspace portion and a second workspace portion; assigning said first workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and processing, said first event using said first protocol processing core and said second protocol processing core. (Col 4, lines 39-47)

The general concept of providing said first flow state including a first workspace portion and a second workspace portion; assigning said first workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and processing, said first event using said first protocol processing core and said second protocol processing core.

is well known in the art as illustrated by Lawande who discloses said first flow state including a first workspace portion and a second workspace portion; assigning said first

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workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and processing, said first event using said first protocol processing core and said second protocol processing core in a data processing system and method. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of said first flow state including a first workspace portion and a second workspace portion; assigning said first workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and processing, said first event using said first protocol processing core and said second protocol processing core in his advantageous method as taught by Lawande in order to improve data processing.

Regarding claims 2 and 10: Chaudri discloses the method, apparatus, (title) and system (claim 1) wherein said first flow state is defined at least in part by a plurality of protocol layers, (Col 2, lines 61- 67 discloses, "in order to group related packets together into flows, it is necessary to determine and identify multiple layers of protocols. The flow can be coarsely defined at a higher layer, requiring the identification of the outer protocol(s). A flow can also be defined at a finer layer of granularity by identifying multiple layers of encapsulated protocols.")

Chaudri discloses all the limitations as disclosed above except for said first workspace portion and said second workspace portion corresponding to different ones of said plurality of protocol layers.

Lawande discloses said first workspace portion and said second workspace portion corresponding to different ones of said plurality of protocol layers. (Lawande discloses TCP in Col 2, line 15, which by definition has a plurality of protocol layers and Lawande discloses a first and second workspace portion. Col 4, lines 38-47 disclose "The first module has a first memory and a first processor, with the first memory containing a first packet identifier. The first processor accesses the first memory, obtaining the first packet identifier, and forms a data stream containing the first packet identifier. The second module has a second memory and a second processor, with the second memory containing a second packet identifier. The second processor has a comparator which compares the second packet identifier with the first packet identifier in the data stream."

The general concept of providing said first workspace portion and said second workspace portion corresponding to different ones of said plurality of protocol layers is well known in the art as illustrated by Lawande who discloses said first workspace portion and said second workspace portion corresponding to different ones of said plurality of protocol layers in a packet processing method and system.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of said first workspace portion and said second workspace portion corresponding to different ones of said plurality of protocol layers in his advantageous method as taught by Lawande in order to improve packet processing.

Regarding claim 3: Chaudri discloses all the limitations of claim 3 except for wherein said processing includes modifying said first workspace portion in order to thereby yield a modified first workspace portion, and writing back said modified first workspace portion.

Lawande discloses said processing includes modifying said first workspace portion in order to thereby yield a modified first workspace portion, and writing back said modified first workspace portion. (Lawande discloses in Col 4, lines 9-10, that the module contains a memory, which contains an identifier address. In order for the memory to contain the address, the memory must have been modified and written to contain it.)

The general concept of providing said processing includes modifying said first workspace portion in order to thereby yield a modified first workspace portion, and writing back said modified first workspace portion is well known in the art as illustrated by Lawande who discloses providing said processing includes modifying said first workspace portion in order to thereby yield a modified first workspace portion, and writing back said modified first workspace portion.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of said processing includes modifying said first workspace portion in order to thereby yield a modified first workspace portion, and writing back said modified first workspace portion in his advantageous method as taught by Lawande in order improve packet processing.

Regarding claim 4: Chaudri discloses all the limitations except for wherein said processing further includes communicating an inter core event from said first protocol processing core to said second protocol processing core.

Lawande discloses wherein said processing further includes communicating an inter core event from said first protocol processing core to said second protocol processing core. (In Col 4, lines 38-47 Lawande discloses "The first module has a first memory and a first processor, with the first memory containing a first packet identifier. The first processor accesses the first memory, obtaining the first packet identifier, and forms a data stream containing the first packet identifier. The second module has a second memory and a second processor, with the second memory containing a second packet identifier. The second processor has a comparator which compares the second packet identifier with the first packet identifier in the data stream." This implies an inter core event since both processors are involved with the event.

The general concept of providing said processing further includes communicating an inter core event from said first protocol processing core to said second protocol processing core is well known in the art as illustrated by Lawande who discloses said processing further includes communicating an inter core event from said first protocol processing core to said second protocol processing core.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of said processing further includes communicating an inter core event from said first protocol processing core to said

second protocol processing core in his advantageous method as taught by Lawande in order to improve packet processing.

Regarding claim 5: Chaudri discloses all the limitations except for wherein said second protocol processing core modifies said second workspace portion in order to create a modified second workspace portion and writes back said second modified workspace portion.

Lawande discloses wherein said second protocol processing core modifies said second workspace portion in order to create a modified second workspace portion and writes back said second modified workspace portion. (Lawande discloses in Col 4, lines 10-15 that the processor has a memory with a lookup table for which addresses are assigned and placed into the lookup table. Col 4, lines 1-5)

The general concept of providing said second protocol processing core modifies said second workspace portion in order to create a modified second workspace portion and writes back said second modified workspace portion is well known in the art as illustrated by Lawande who discloses said second protocol processing core modifies said second workspace portion in order to create a modified second workspace portion and writes back said second modified workspace portion.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of said second protocol processing core which modifies said second workspace portion in order to create a modified second workspace portion and writes back said second modified workspace portion in his

advantageous method as taught by Chaudri in order to improve packet processing.

Regarding claims 7 and 15: Chaudri discloses the method and apparatus wherein said first flow state further includes a shared flow state provided to both said first protocol processing core and said second protocol processing core. (Col 7 lines 5-20 disclose a processor, which processes flows and discloses additional routers which process the packets further according to the flow information.)

Regarding claim 9: Chaudri discloses a processing system configured to process multiple flows of messages, (Col 3, lines 1-4) said apparatus (title) comprising: a first protocol processing core; (Col 7, lines 5-10, "processor 130), an input module configured to receive a first message of a first flow comprised of a first plurality of messages (Claim 1) and to derive a first event from said first message, (Claim 1, "flow definitions derived from said flow identifications provided by said data structures" and Claim 2, "extract data from said data unit") said first message containing flow information identifying said first flow; (Claim 1) a lookup controller operative to retrieve, using said flow information, a first flow state characterizing said first flow, (Col 5, lines 9-11 disclose a search engine which identifies the flow identification.)

Chaudri discloses all the limitations as disclosed above except for a stateful protocol, consistent with a stateful protocol associated with said first flow, a second protocol processing core; said first flow state including a first workspace portion assigned to said first protocol processing core and a second workspace portion

assigned to said second protocol processing core; wherein said first event is processed using said first protocol processing core and said second protocol processing core.

Lawande discloses a stateful protocol and consistent with a stateful protocol associated with said first flow, (Since TCP is disclosed in Col in Col 2, lines 14-15, Figure 5, and in Col 11, line 31, a state is implicit since TCP is a stateful protocol which uses state relevant information, and Lawande discloses "incoming data stream" Col 4, lines 19-20, which can be interpreted as flows.)

a second protocol processing core; said first flow state including a first workspace portion assigned to said first protocol processing core and a second workspace portion assigned to said second protocol processing core; wherein said first event is processed using said first protocol processing core and said second protocol processing core.

(Col 4, lines 39-47)

The general concept of providing a second protocol processing core; said first flow state including a first workspace portion assigned to said first protocol processing core and a second workspace portion assigned to said second protocol processing core; wherein said first event is processed using said first protocol processing core and said second protocol processing core is well known in the art as illustrated by Lawande who discloses a second protocol processing core; said first flow state including a first workspace portion assigned to said first protocol processing core and a second workspace portion assigned to said second protocol processing core; wherein said first event is processed using said first protocol processing core and said second protocol processing core.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of a second protocol processing core; said first flow state including a first workspace portion assigned to said first protocol processing core and a second workspace portion assigned to said second protocol processing core; wherein said first event is processed using said first protocol processing core and said second protocol processing core in his advantageous method as taught by Lawande in order to improve packet processing.

Regarding claim 27: Chaudri discloses the method of claim 1 wherein said first event includes state information relevant to said stateful protocol. (Col 4, line 5, flow identifier may be attached to the packet)

3. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudri in view of Lawande and Lorenz (US patent 5892922)

Regarding claim 11: Chaudri discloses all the limitations as disclosed except for wherein said first protocol processing core modifies said first workspace portion and thereby creates a modified first workspace portion, said first protocol processing core further writing back said modified first workspace portion to said lookup controller

Lorenz discloses wherein said first protocol processing core modifies said first workspace portion and thereby creates a modified first workspace portion, said first protocol processing core further writing back said modified first workspace portion to said lookup controller. (Col 2, lines 22-33 discloses that information is sent to the

switch, where it is stored in the lookup table. Claim 1 discloses that the switch has a processor and that the processor modifies the workspace portion by writing to the memory lookup table.)

The general concept of providing said first protocol processing core modifies said first workspace portion and thereby creates a modified first workspace portion, said first protocol processing core further writing back said modified first workspace portion to said lookup controller is well known in the art as illustrated by Lorenz who discloses a first protocol processing core modifying said first workspace portion which thereby creates a modified first workspace portion, said first protocol processing core further writing back said modified first workspace portion to said lookup controller.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of said first protocol processing core modifies said first workspace portion and thereby creates a modified first workspace portion, said first protocol processing core further writing back said modified first workspace portion to said lookup controller in his advantageous method as taught by Lorenz in order to improve packet processing.

Regarding claim 12: Chaudri discloses all the limitations except for wherein said processing further includes communicating an inter core event from said first protocol processing core to said second protocol processing core.

Lawande discloses wherein said processing further includes communicating an inter core event from said first protocol processing core to said second protocol

processing core. (In Col 4, lines 38-47 Lawande discloses "The first module has a first memory and a first processor, with the first memory containing a first packet identifier. The first processor accesses the first memory, obtaining the first packet identifier, and forms a data stream containing the first packet identifier. The second module has a second memory and a second processor, with the second memory containing a second packet identifier. The second processor has a comparator which compares the second packet identifier with the first packet identifier in the data stream." This implies an inter core event since both processors are involved with the event.

The general concept of providing said processing further includes communicating an inter core event from said first protocol processing core to said second protocol processing core is well known in the art as illustrated by Lawande who discloses said processing further includes communicating an inter core event from said first protocol processing core to said second protocol processing core.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of said processing further includes communicating an inter core event from said first protocol processing core to said second protocol processing core in his advantageous method as taught by Lawande in order to improve packet processing.

Regarding claim 13: Chaudri discloses all the limitations except for wherein said second protocol processing core modifies said second workspace portion in order to create a modified second workspace portion and writes back said second modified

workspace portion to said lookup controller. Lawande discloses wherein said second protocol processing core modifies said second workspace portion in order to create a modified second workspace portion and writes back said second modified workspace portion to said lookup controller. (Lawande discloses in Col 4, lines 10-15 that the processor has a memory with a lookup table for which addresses are assigned and placed into the lookup table. Col 4, lines 1-5)

The general concept of providing said second protocol processing core modifies said second workspace portion in order to create a modified second workspace portion and writes back said second modified workspace portion to said lookup controller is well known in the art as illustrated by Lawande who discloses said second protocol processing core modifies said second workspace portion in order to create a modified second workspace portion and writes back said second modified workspace portion to said lookup controller.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of said second protocol processing core modifies said second workspace portion in order to create a modified second workspace portion and writes back said second modified workspace portion to said lookup controller in his advantageous method as taught by Lawande in order to improve packet processing.

4. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudri in view of Lawande, Shwagmann (US patent 5321844) and Drummond (US patent 6237021)

Regarding claim 23: Chaudri discloses all the limitations except for wherein said modified first workspace portion and said modified second workspace portion are written to said common memory as a contiguous block.

Schwagmann discloses a modified first workspace portion and said modified second workspace portion, which is written to said common memory. (Col 5, lines 14-16, which discloses that the modified contents of the local memory is saved to the common memory. Also see Col 4, lines 66-67).

The general concept of providing is well known in the art as illustrated by Schwagmann who discloses a modified first workspace portion and said modified second workspace portion, which is written to said common memory.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of a modified first workspace portion and said modified second workspace portion which is written to said common memory in his advantageous method as taught by Schwagmann in order to improve processor systems.

Drummond teaches the writing back of data into a contiguous block of memory in Column 2, line 60, where he states "The architecture includes a memory arranged to store the algorithm input data in parallel, contiguous bit locations.". It is implied that in order to store the data in memory, it must first be written in memory. The general concept of providing writing back data into a contiguous block of memory is well known

in the art as illustrated by Drummond who discloses data being written to a contiguous block of memory.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Rajamony to include the provision for writing back the workspace portions in a contiguous block of memory as taught by Drummond in order to provide "sustained, peak performance" as stated by Drummond in his Abstract, lines 1-2.

Regarding claim 24: Chaudri discloses all the limitations except for wherein said first workspace portion and said second workspace portion are stored within a contiguous block within said common memory.

Lawande teaches a first workspace portion and a second workspace portion. (Col 4, lines 66-67 disclose a plurality of processors with local memory systems allocated thereto.)

Drummond teaches the storing of data into a contiguous block of memory in Column 2, line 60, where he states "The architecture includes a memory arranged to store the algorithm input data in parallel, contiguous bit locations." The general concept of providing storing data into a contiguous block of memory is well known in the art as illustrated by Drummond who discloses data being stored in a contiguous block of memory.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Rajamony to include the provision for writing back the workspace

portions in a contiguous block of memory as taught by Drummond in order to provide "sustained, peak performance" as stated by Drummond in his Abstract, lines 1-2.

5. Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudri in view of Lawande and Jorgensen (US publication 2002/0099854).

Regarding claim 28: Chaudri discloses a method of processing data in a stateful protocol processing system, said method comprising:

receiving a first message of a first flow comprised of a first plurality of messages, (Col 2, lines 45-49) said first flow being characterized by a first flow state; retrieving said first flow state, (identifying flows and search on data to identify flows Col 3, lines 58-67, and since the flow identifier is attached to the packet after it has been identified, and processed, the flow state has been retrieved.) deriving a first event from said first message, (Col 3, lines 52-53 and Col 8, lines 12-13, "flow definitions derived from said flow identifications.."), said deriving, (Col 8, lines 12-13)

Chaudri discloses all the limitations except for including separating state information relevant to said first flow state from other information in said first message; said first flow state including a first workspace portion and a second workspace portion; assigning said first workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and processing said first event using said first protocol processing core and said second protocol processing core.

Jorgensen discloses deriving including separating state information relevant to

said first flow state from other information in said first message; (Paragraph 0477 discloses that the packet header fields are extracted and parsed for IP flows)

Lawande discloses said first flow ("incoming data stream" Col 4, lines 19-20) state (Since TCP is disclosed in Col in Col 2, lines 14-15, a state is implicit since TCP is a stateful protocol which uses state relevant information) including a first workspace portion and a second workspace portion; assigning said first workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and processing, said first event using said first protocol processing core and said second protocol processing core. (Col 4, lines 39-47)

The general concept of providing said first flow state including a first workspace portion and a second workspace portion; assigning said first workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and processing, said first event using said first protocol processing core and said second protocol processing core.

is well known in the art as illustrated by Lawande who discloses said first flow state including a first workspace portion and a second workspace portion; assigning said first workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and processing, , said first event using said first protocol processing core and said second protocol processing core in a data processing system and method.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of said first flow state including a first

workspace portion and a second workspace portion; assigning said first workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and processing, said first event using said first protocol processing core and said second protocol processing core in his advantageous method as taught by Lawande in order to improve data processing.

Regarding claim 29: Chaudri discloses the method of claim 28 wherein the deriving includes determining the first event to be of a first type and including an indication of said first type in a representation of the first event. (Col 4, line 5, "flow identifier may be attached to the packet, which is an event, and the flow is identified or derived")

Regarding claim 30: Chaudri discloses the method of claim 29 wherein said processing of said first event is performed in accordance with said first type. (Col 4, line 5, "flow identifier may be attached to the packet, which is an event, and the flow is identified or derived, which is part of the event processing")

6. Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudri in view of Lawande and Kemp et al, hereinafter referred to as Kemp (US patent 6621799).

Regarding claims 6 and 14: Chaudri discloses all the limitations except for a done signal upon completing processing of said first event, said done signal causing release of an event queue element associated with said first protocol processing core.

Kemp discloses a done signal and event queue in a data communications system and method. (Figure 4, Done queued 476, Done 478, and other event queues are listed.) The general concept of providing a done signal and releasing an event queue is well known in the art as illustrated by Kemp which discloses a done signal and event queues in a data communications method. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of a done signal and an event queue element as taught by Kemp in order to "provide higher throughput" as stated by Kemp in his Abstract, line 13.

7. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudri in view of Lawande and Intihar (US patent 6300964).

Regarding claims 8 and 16: Chaudri discloses all of the limitations except for a write mask to prevent selected areas from being overwritten.

Intihar discloses a write mask to save data from being overwritten. The general concept of providing a write mask is well known in the art as illustrated by Intihar, which discloses a write mask in a storage retrieval method and apparatus. ("A write mask generator is used to mask predetermined sections of memory addressed by the pointer where it is desired to prevent overwriting of data". Column 2 of the specification, lines 55-57.)

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of a write mask to prevent selected areas from being overwritten as taught by Intihar in order to "mask predetermined sections of

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memory addressed by the pointer where it is desired to prevent overwriting of data", as stated by Intihar in Column 2, lines 55-57.

8. Claims 17-21, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudri in view of Lawande and Schwagmann (US patent 5321844).

Regarding claim 17: Chaudri discloses a method of processing data in a processing system, said method comprising:
receiving a first message of a first flow comprised of a first plurality of messages, (Col 2, lines 45-49) said
first message containing flow information identifying said first flow; (Col 3, line 58)
deriving a first event from said first message; (Col 4, line 5) retrieving from a common memory using said flow information, a first flow state characterizing said first flow, said first flow state (abstract diagram, in which the search engine uses the search key to access the search memory in which claim 1 discloses that the search memory contains structures corresponding to a plurality of flow definitions); processing said first event consistent with said first flow (Col 3, lines 1-3 discloses processing flows and Col 4, line 5 discloses the event of attaching a flow identifier to the packet.)

Chaudri discloses all the limitations except for a stateful protocol, with a stateful protocol associated, including a first workspace portion and a second workspace portion, storing said first workspace portion in a first local memory and said second workspace portion in a second local memory distinct from said first local memory; and making corresponding modifications within said first workspace portion and said second workspace portion, thereby yielding a modified first workspace portion and a

modified second workspace portion, respectively; and writing said modified first workspace portion and said modified second workspace portion to said common memory.

Lawande discloses a stateful protocol and with a stateful protocol associated with said first flow (TCP is disclosed in Col in Col 2, lines 14-15, Figure 5, and in Col 11, line 31, a state is implicit since TCP is a stateful protocol which uses state relevant information and Lawande discloses an "incoming data stream" Col 4, lines 19-20)

The general concept of providing a stateful protocol and consistent with a stateful protocol associated with said first flow is well known in the art as illustrated by Lawande who discloses a stateful protocol and consistent with a stateful protocol associated with said first flow. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of a stateful protocol and consistent with a stateful protocol associated with said first flow in his advantageous method as taught by Lawande in order to provide stateful processing.

Schwagmann discloses including a first workspace portion and a second workspace portion, storing said first workspace portion in a first local memory and said second workspace portion in a second local memory distinct from said first local memory; and making corresponding modifications within said first workspace portion and said second workspace portion, thereby yielding a modified first workspace portion and a modified second workspace portion, respectively; and writing said modified first workspace portion and said modified second workspace portion to said common memory. (Col 4, lines 57-58, "processors...and local memory systems", which are

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corresponding "respective memory systems" for the plurality of processors Col 5, lines 14-15, and for which the memories are modified and also written back to the common memory. Col 5, lines 14-16.)

The general concept of including a first workspace portion and a second workspace portion, storing said first workspace portion in a first local memory and said second workspace portion in a second local memory distinct from said first local memory; and making corresponding modifications within said first workspace portion and said second workspace portion, thereby yielding a modified first workspace portion and a modified second workspace portion, respectively; and writing said modified first workspace portion and said modified second workspace portion to said common memory is well known in the art as illustrated by Schwagmann who discloses including a first workspace portion and a second workspace portion, storing said first workspace portion in a first local memory and said second workspace portion in a second local memory distinct from said first local memory; and making corresponding modifications within said first workspace portion and said second workspace portion, thereby yielding a modified first workspace portion and a modified second workspace portion, respectively; and writing said modified first workspace portion and said modified second workspace portion to said common memory.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of including a first workspace portion and a second workspace portion, storing said first workspace portion in a first local memory and said second workspace portion in a second local memory distinct from said first

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local memory; and making corresponding modifications within said first workspace portion and said second workspace portion, thereby yielding a modified first workspace portion and a modified second workspace portion, respectively; and writing said modified first workspace portion and said modified second workspace portion to said common memory in his advantageous method as taught by Schwagmann in order to improve processor systems.

Regarding claim 18: Chaudri discloses protocol processing. (Figure 2, and Col 3, line 3, "process the flow") Chaudri all the limitations except for wherein said first local memory is associated with a first core and said second local memory is associated with a second core.

Schwagmann teaches said first local memory is associated with a first core and said second local memory is associated with a second core.

(Col 4, lines 65-67)

The general concept of providing teaches said first local memory is associated with a first core and said second local memory is associated with a second core is well known in the art as illustrated by Schwagmann who discloses a first local memory associated with a first core and said second local memory associated with a second core.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of a first local memory associated with a

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first core and said second local memory associated with a second core in his advantageous method as taught by Schwagmann in order improve processor systems.

Regarding claim 19: Chaudri discloses all the limitations except for wherein said first protocol processing core performs an initial portion of said processing of said first event and then hands off said first event to said second protocol processing core for performance of a subsequent portion of said processing of said first event.

Lawande teaches a first protocol processing core which performs an initial portion of said processing of said first event and then hands off said first event to said second protocol processing core for performance of a subsequent portion of said processing of said first event. (Col 4, lines 18-34)

The general concept of providing a first protocol processing core which performs an initial portion of said processing of said first event and then hands off said first event to said second protocol processing core for performance of a subsequent portion of said processing of said first event, is well known in the art as illustrated by Lawande who discloses a first protocol processing core which performs an initial portion of said processing of said first event and then hands off said first event to said second protocol processing core for performance of a subsequent portion of said processing of said first event.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of a first protocol processing core which performs an initial portion of said processing of said first event and then hands off said

first event to said second protocol processing core for performance of a subsequent portion of said processing of said first event in his advantageous method as taught by Lawande in order to improve packet processing.

Regarding claim 20: Chaudri discloses protocol processing. Chaudri discloses all the limitations except for wherein said first core modifies said first workspace portion in connection with said initial portion of said processing and said second core modifies said second workspace portion in connection with said subsequent portion of said processing.

Lawande discloses wherein said first core modifies said first workspace portion in connection with said initial portion of said processing and said second core modifies said second workspace portion in connection with said subsequent portion of said processing. (Col 4, lines 37-47 discloses the processors with memories which contain identifiers and which also perform initial and subsequent processing of an event, and it is implied that these memories must have been modified in order to contain the identifiers.)

The general concept of providing is well known in the art as illustrated by Lawande who discloses a first core which modifies said first workspace portion in connection with said initial portion of said processing and said second core which modifies said second workspace portion in connection with said subsequent portion of said processing.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of a first core which modifies said first workspace portion in connection with said initial portion of said processing and said second core which modifies said second workspace portion in connection with said subsequent portion of said processing in his advantageous method as taught by Lawande in order to improve packet processing.

Regarding claim 21: Chaudri discloses all the limitations as disclosed except for wherein said first protocol processing core performs an initial portion of said processing of said first event and said second protocol processing core subsequently performs a final portion of said processing of said first event.

Lawande discloses wherein said first protocol processing core performs an initial portion of said processing of said first event and said second protocol processing core subsequently performs a final portion of said processing of said first event. (Col 4, lines 37-47)

The general concept of providing is well known in the art as illustrated by Lawande who discloses wherein said first protocol processing core performs an initial portion of said processing of said first event and said second protocol processing core subsequently performs a final portion of said processing of said first event.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of wherein said first protocol processing core performs an initial portion of said processing of said first event and said second

protocol processing core subsequently performs a final portion of said processing of said first event in his advantageous method as taught by Lawande in order to improve packet processing.

Regarding claim 25: Chaudri discloses the method, apparatus, (title) and system (claim 1) wherein said first flow state is defined at least in part by a plurality of protocol layers, (Col 2, lines 61- 67 discloses, "in order to group related packets together into flows, it is necessary to determine and identify multiple layers of protocols. The flow can be coarsely defined at a higher layer, requiring the identification of the outer protocol(s). A flow can also be defined at a finer layer of granularity by identifying multiple layers of encapsulated protocols.")

Chaudri discloses all the limitations as disclosed above except for said first workspace potion and said second workspace portion corresponding to different ones of said plurality of protocol layers.

Lawande discloses said first workspace potion and said second workspace portion corresponding to different ones of said plurality of protocol layers. (Lawande discloses TCP in Col 2, line 15, which by definition has a plurality of protocol layers and Lawande discloses a first and second workspace portion. Col 4, lines 38-47 discloses "The first module has a first memory and a first processor, with the first memory containing a first packet identifier. The first processor accesses the first memory, obtaining the first packet identifier, and forms a data stream containing the first packet identifier. The second module has a second memory and a second processor, with the

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second memory containing a second packet identifier. The second processor has a comparator which compares the second packet identifier with the first packet identifier in the data stream.”

The general concept of providing said first workspace portion and said second workspace portion corresponding to different ones of said plurality of protocol layers is well known in the art as illustrated by Lawande who discloses said first workspace portion and said second workspace portion corresponding to different ones of said plurality of protocol layers in a packet processing method and system.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chaudri to include the use of said first workspace portion and said second workspace portion corresponding to different ones of said plurality of protocol layers in his advantageous method as taught by Lawande in order to improve packet processing.

Response to arguments.

The rule 131 affidavit has effectively removed the prior art rejection made on 3/12/2007 and the new grounds of rejection have been set forth in this second action non-final rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joan B. Naurot Ton whose telephone number is 571-

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270-1595. The examiner can normally be reached on M-Th 9 to 6:30 (flex sched) and alt Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JBNT
10/01/2007



NATHAN FLYNN
SUPERVISORY PATENT EXAMINER